

JUNEAU COUNTY FOREST COMPREHENSIVE LAND USE PLAN

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CHAPTER 300

DESCRIPTION OF FOREST AND MANAGEMENT PLANNING

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## **300 DESCRIPTION OF FOREST**

### **300.1 COUNTY FOREST OWNERSHIP**

The County Forest is composed of 33 management compartments ranging in size from 120 acres to nearly 1020 acres. A map of these compartments can be found in the Appendix.

### **300.2 NATURAL FEATURES**

#### **300.2.1 Topography**

The Juneau County Forest, located in the south-central part of the state, lies primarily within two physiographic regions of Wisconsin, the Central Sand Plains and the Western Coulee and Ridges. The topography of the forest and surrounding area was affected by the last glaciations although the area was not glaciated. The northern portion of the County Forest was part of the bed of glacial lake Wisconsin at the time of the last glaciations. In the southern portion of the County Forest the area was part of the unglaciated area of Wisconsin. The terrain ranges from gently rolling in the Town of Armenia to steep and hilly in the Seven Mile Creek portion of the forest.

#### **300.2.2 Geography**

Juneau County has a land area of approximately 515,000 acres, plus another approximately 19,000 acres of water included in lakes and streams. Approximately 51 percent of the land in the county is classified as forest land. The County Forest, which contains approximately 17,798 acres ranks 23<sup>rd</sup> largest county forest in the state.

Appendix 1000 contains maps showing the location of the County Forest.

#### **300.2.3 Geology and Soils**

The soils of Juneau County have been derived largely from glacial lake and outwash deposits. Since the glacial period, the soils have been modified by water action, wind, and the accumulation and incorporation of organic material. Soil types on the Central Sands Plains of the County Forest range from poorly drained or somewhat poorly drained sandy soils and mucky organic soils in the Yellow River and Cutler portions of the Forest to

excessively drained upland sands in the New Miner and Clearfield portions of the County Forest. In the Western Coulee and Ridges, the soils are formed from weathered sandstone. The soils are silt and sandy loams in the Bass Hollow portion of the County Forest. A generalized soil map can be found in the Appendix Chapter 1000. Detailed soils information is available from the USDA Web Soil Survey ([websoilsurvey.nrcs.usda.gov](http://websoilsurvey.nrcs.usda.gov)).

#### 300.2.4 Ecological Landscapes

Ecological Landscapes are regions in Wisconsin containing similar ecology and management opportunities. Each landscape can present unique management opportunities and challenges. These landscapes are essentially based on the National Hierarchical Framework of Ecological Units (NHFUE) (Cleland et al. 1997). More information on the 16 Ecological Landscapes defined within Wisconsin is available at: <https://dnr.wi.gov/topic/landscapes/index.asp?mode=Choose>

The Juneau County Forest lies within the *Central Sand Plains* and the *Western Coulee & Ridges* Ecological Landscape(s).

Central Sand Plains - The eastern portion of the Central Sand Plains is a mosaic of cropland, managed grasslands and scattered woodlots of pine, oak, and aspen. Many of the historic wetlands in the east were drained early in the 1900s and are now used for agricultural purposes. The western portion of this Ecological Landscape is mostly forest or wetland. Oak, pine, and aspen are the most abundant forest cover types. Plantations of red pine are common in some areas. On wet sites the forests are of two major types: tamarack and black spruce in the peatlands, and bottomland hardwoods in the floodplains of the larger rivers. Many attempts to practice agriculture west of the Wisconsin River failed due to poor soils, poor drainage, and growing season frosts.

Western Coulee & Ridges - Current land cover is a mix of forest (41%), agriculture (36%), and grassland (14%) with wetlands (5%) mostly in the river valleys. Primary forest cover is oak-hickory (51%). Maple-basswood forests (28%), dominated by sugar maple, basswood and red maple, are common in areas that were not burned frequently. Bottomland hardwoods (10%) dominated by silver maple, swamp white oak, river birch, ashes, elms,

and cottonwood are common within the floodplains of the larger rivers. Relict "northern" mesic conifer forests composed of hemlock, white pine and associated hardwoods such as yellow birch are rare but do occur in areas with cool, moist microclimates. Dry rocky bluffs may support xeric stands of native white pine, sometimes mixed with red or even jack pine. Prairies are now restricted to steep south- or west-facing bluffs, unplowed outwash terraces along the large rivers, and a few other sites. They occupy far less than 1% of the current landscape. Mesic tallgrass prairies are now virtually nonexistent except as very small remnants along rights-of-way or in cemeteries.

#### 300.2.4.1 Land Type Associations

Land type associations are units of the National Hierarchical Framework of Ecological Units (NHFEU) classification system. They are much smaller than Ecological Landscapes and are generally based on glacial features. They can be useful for planning at finer scales within a landscape. The following Land Type Associations are present within the Ecological Landscapes of the Juneau County Forest: The Wisconsin River Outwash Terraces, Tomah-Mauston Terraces, Yellow River Floodplain and Terraces, Yellow River Siliceous Terrace and Trempealeau Sandstone Hills. LTA's, having common ecological characteristics, allow land managers to better plan for future vegetative communities, wildlife species to feature, and compatible recreation uses. More information is available at: <https://dnr.wi.gov/topic/landscapes/index.asp?mode=detail&Landscape=11>

#### 300.2.5 Vegetative Cover Types

Approximately 86.4 percent of the Juneau County Forest land base is forested. Forested uplands are comprised of primarily aspen, fir-spruce, red maple, oak scrub oak, jack pine, red pine and white pine while off-site aspen, bottomland hardwood and swamp hardwood occupy the forested lowlands. The remainder, 13.6 percent, is classified as non-forested including types such as open water, wetlands, rights-of-way, grass openings, shrubs and bogs.

### FORESTED COMMUNITIES

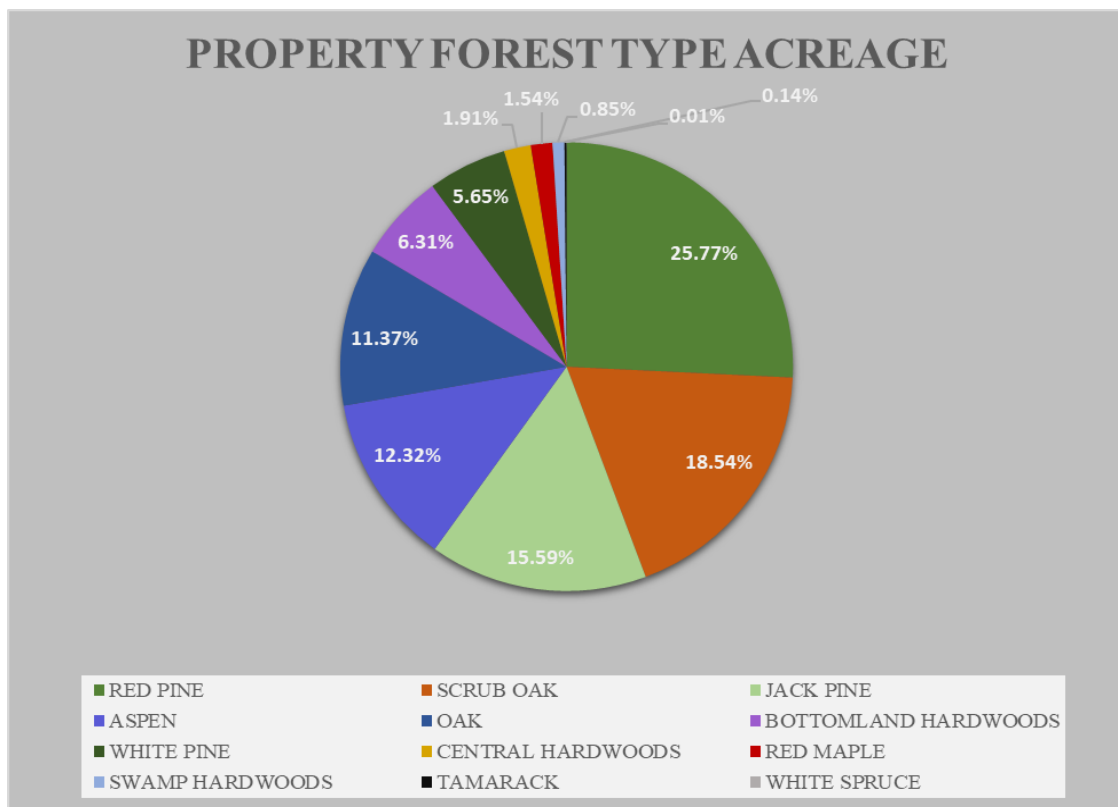
The forested cover types are made up of a variety of size classes (*regeneration, sapling-pole, and saw timber*) and structure (*canopy, layers, ground vegetation, dead and downed*

*material and inclusions*). Approximately 86.4 percent of the Juneau County Forest land base is forested. Forested uplands are comprised of primarily aspen, oak, scrub oak, red maple, jack pine, red pine and white pine while off-site aspen, bottomland hardwood and swamp hardwood occupy the forested lowlands.

Forest cover types associated with the County Forest are:

<b>Forest Type</b>	<b>Acres</b>	<b>Percent</b>	<b>Description</b>
RED PINE	3,957.00	25.77%	Red pine comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. In mixed pine stands, red pine is predominant.
SCRUB OAK	2,847.00	18.54%	More than 50% of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands is comprised of oak with site indices <50. Typical forest products include only fuelwood and fiber.
JACK PINE	2,393.00	15.59%	Jack pine comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. In mixed pine stands, jack pine is predominant.
ASPEN	1,891.00	12.32%	Aspen comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands.
OAK	1,746.00	11.37%	Oak comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in saplings and seedling stands.
BOTTOMLAND HARDWOODS	969.00	6.31%	Any combination of silver maple, green ash, swamp white oak, American elm, river birch, and cottonwood comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. Hardwood dominated forests occurring on floodplains and some terraces.
WHITE PINE	868.00	5.65%	White pine comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. In mixed pine stands, white pine is predominant.
CENTRAL HARDWOODS	293.00	1.91%	Any combination of oaks, hickories, elms, black cherry, hackberry, red maple, white ash, green ash, basswood, and sugar maple, which does not satisfy the defining criteria for NH, MR, or O cover types. The CH type occurs only on uplands within and south of the Tension Zone (southern Wisconsin).

RED MAPLE	237.00	1.54%	Red Maple comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. If soil is poorly drained, then swamp hardwood.
SWAMP HARDWOODS	130.00	0.85%	Any combination of black ash, green ash, red maple, silver maple, swamp white oak, and American elm that comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. This type occurs on wetlands characterized by periodic inundation (fluctuating water table near or above the soil surface) and nearly permanent subsurface water flow.
TAMARACK	21.00	0.14%	Tamarack comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands. In mixed swamp conifer stands, tamarack is predominant.
WHITE SPRUCE	2.00	0.01%	White spruce comprises 50% or more of the basal area in saw-timber and pole-timber stands, or 50% or more of the stems in sapling and seedling stands.
<b>Total</b>	<b>15,354.00</b>	<b>100%</b>	



*See Chapter 830 for detailed discussion on Biological Community Types.*

## NON-FORESTED COMMUNITIES

Non-forested habitats are important components of management within the County Forest.

Up-land and wetland non-forest types provide important habitat for distinct groups of species. Approximately 13.6 percent of the Juneau County Forest land consists of non-forested habitats.

### Upland Non-Forest

Upland non-forest areas of the County Forest include:

*Grass openings-* consist of upland grasses such as brome, quack, bluegrass, timothy, big and little bluestem, and Indian grass.

*Herbaceous vegetation-* ground cover predominated by herbaceous species with bracken fern, sweet clover, giant ragweed, sting nettle, upland aster, goldenrod, and prairie dock being common.

*Shrub opening-* primarily upland site less than 10% stocked with tree species but having 50% or more of the area stocked with taller growing, persistent shrubs. This includes hazel, dogwood, junberry, sumac, alder, willow, and prickly ash.

*Rock outcrops-* include rocky talus and bedrock.

### Wetlands

Wisconsin State Statutes define a wetland as “an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation, and which has soil indicative of wet conditions.” Wetland communities are recognized to be a complex association of plants and animals, soils and water levels having special natural values. They provide many functional values including shoreline and flood protection, water quality protection, groundwater recharge, and animal and plant habitat. Therefore, it is the policy of Juneau County to preserve, protect, and manage wetlands under its jurisdiction in manner that recognizes the natural values of wetland and their importance on the

environment. Scientist distinguish dozens of wetland types, characterized by vegetation, soil type and degree of saturation or water cover.

Some of the more prominent wetland types found on the County Forest include:

*Aquatic bed-* plants growing entirely on or in a water body no deeper than 6 feet. Plants may include pondweed, duckweed, lotus and water-lilies.

*Marshes-* characterized by standing water and dominated by cattails, bulrushes, pickerelweed, lake sedges and/or giant bur-reed.

*Sedge or “wet” meadows-* these wetlands more often than not have saturated soils rather than standing water. Sedges, grasses and reeds dominant, but may also have blue flag iris, marsh milkweed, sneezeweed, mint and several species of goldenrod and aster.

*Scrub/shrub-* these areas, which include bogs and alder thickets, are characterized by woody shrubs and small trees such as tag alder, bog birch, willow and dogwood.

*Forested-* these areas, include bogs and forested floodplain complexes, are characterized by trees 20 feet or more in height such as tamarack, white cedar, black spruce, elm, black ash, green ash and silver maple.

Forest management is conducted on many of the forested wetlands with activities occurring primarily during frozen conditions. See Chapter 830 for detailed discussion on Biological Community Types.

### 300.2.6 Fish and Wildlife

Wisconsin supports over 650 different types of mammals, birds, reptiles, amphibians and fish as well as millions of invertebrates. Management of county forest lands and the biotic communities they support provide a mix of habitat types and ages for a wide range of wildlife species. Each species, or interacting group of species, do best under different conditions. County forest lands provide a full range of habitats from open



grasslands/barrens to mature forests, from bogs to forested wetlands, from spring ponds to lake shorelines. County forest staffs work closely with WDNR fish and wildlife managers and conservation organizations to identify and manage critical habitat for breeding, migrating and wintering fish and wildlife.

While the Juneau County Forest provides for a wide range of fish and wildlife species, current management strategies or programs have emphasized the following species and/or communities:

#### 300.2.7 Rare and Endangered Resources

A review of the Natural Heritage Inventory (NHI) indicates the presence of a number of rare species, natural communities and unique natural features on the Juneau County Forest. All land disturbing projects will include an evaluation phase, to determine whether an NHI screening is required.

The Natural Heritage Inventory Database is the most comprehensive source of rare species data for Wisconsin. These data are used for a variety of purposes including research, land management, state land master planning, community planning, conservation planning and review of public and private activities across the state, The NHI Portal is currently available to DNR staff and County Forest staff who hold a data sharing license.

The Wisconsin Historical Preservation Database is the most comprehensive source of cultural resources for Wisconsin. These data are used for a variety of purposes including research, land management, state land master planning, community planning, conservation planning and review of public and private activities across the state, The Wisconsin Historical Preservation Database is currently available to DNR staff and County Forest staff.

#### 300.2.8 Water

Juneau County has 12 acres of unnamed lakes and 15 miles of streams. Of these unnamed lakes and streams the fishery resource is limited. A complete inventory of the surface water

resources in Juneau County can be found in Appendix, \_\_\_\_\_.

### 300.3 CULTURAL FACTORS

#### 300.3.1 Economy

The importance of the County Forests to Wisconsin's economic health continues to rise. County Forests sustain over 60,000 full-time jobs derived from logging, trucking, paper production, manufactured building materials, and lumber. Many other jobs are created in such businesses as the expanding printing industry and are located far from the forested northland. County Forests contribute to the 24 billion dollar forest industry in Wisconsin.

In addition, the lands managed by these 29 counties provide an important recreation resource to complement our state's valuable tourism industry. Tourists spend valuable money at local businesses. By providing 2.4 million acres of public recreation land, we bring tourist to our state. As population increases and public access to privately owned forestland decreases, the need for accessible lands unquestionably will assume an ever more important role. More information on the economic impact of the County Forest program can be found at <https://www.wisconsincountyforests.com/>

Production of forest products and spin-off industries derived from the recreational opportunities on the Forest and the forest products it produces are vitally important to Juneau County's economic well-being. Within Juneau county, there are 137 jobs in the forest industry and these jobs are responsible for an output of 26.9 million dollars. This information can be found at the following link: <https://dnr.wi.gov/topic/forestbusinesses/factsheets.html>.

#### 300.3.2 Education and Research

Education and research continue to be critical components in making decisions that affect our natural resources. As public needs and demands of our forest and its products increase, we must be prepared to assure that sound decisions result. To this end, Juneau County encourages and supports research efforts that relate to the forest, and educational opportunities that will promote a better understanding of forest communities and

management.

#### 300.4 OTHER PUBLIC LANDS OWNERSHIP

Juneau County Forest shares a common boundary with Meadow Valley Wildlife area and Bass Hollow State Natural Area. Roads and trails are connected without interruption between the public lands providing for a more enjoyable experience for the user groups. Juneau County Forest will continue to form and build on these relationships with other adjacent public lands in the best interest of the public.